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BRUHAT BANGLORE MAHANAGARA PALIKE

YALAHANKA ZONE, BANGLORE

QA/QC ABSTRACT

RA 3rd and Part bill

Name of Work:-PACKAGE No-04 Construction of Classrooms to Govt PU College and providing grill fencing and Other developmental Works to ISRO layout Park, Vishweshwarayya park, Raj kumar Park, Sri Saibaba park Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants

Estimate Cost:	950.00 Lakhs
Head of Account:	Amrutha Nagrothana grants
Sanction No	Job No-002-23-000002
Tender Amount	Rs.8,81,41,302/-
Tender Period	9 Months
Reference to Agreement No:	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Name of Contractor and full Address:	B.B Umesha, Class 1 Contractor Bangalore
Date of Commencement	9/3/2022

Sl no	Description	Page No
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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 07-11-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	31-10-2022
Sample Type	Pole Concrete for Park Grill
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M20/ 07 Days Compressive Strength
Date of Test	07-11-2022
Location	Vishweshwarayya Park

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm²	N/mm²
1	Pole	M20	31-10-2022	07-11-2022	150x150x150	22500	395.00	17.56	16.81
2	Pole	M20	31-10-2022	07-11-2023	150x150x150	22500	380.00	16.89	
3	Pole	M20	31-10-2022	07-11-2024	150x150x150	22500	360.00	16.00	

Remarks : Results Found Satisfactory

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Est.Cost Rs 950.00 Lakhs

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) — Date: 28-11-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	31-10-2022
Sample Type	Pole Concrete for Park Grill
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M20/ 28 Days Compressive Strength
Date of Test	28-11-2022
Location	Vishweshwarayya Park

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm^2	N/mm^2
1	Pole	M20	10/31/2022	28-11-2022	150x150x150	22500	498.00	22.13	22.02
2	Pole	M20	10/31/2022	28-11-2022	150x150x150	22500	500.20	22.23	
3	Pole	M20	10/31/2022	28-11-2022	150x150x150	22500	488.00	21.69	

Remarks : Results Found Satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)	Date: 18-11-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	11-11-2022
Sample Type	Pole Concrete for Park Grill
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M20/ 07 Days Compressive Strength
Date of Test	18-11-2022
Location	Sri Sai Baba Park

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm²	N/mm²
1	Pole	M20	11-11-2022	18-11-2022	150x150x150	22500	390.00	17.33	16.37
2	Pole	M20	11-11-2022	18-11-2022	150x150x150	22500	350.00	15.56	
3	Pole	M20	11-11-2022	18-11-2022	150x150x150	22500	365.00	16.22	

Remarks : Results Found Satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 09-12-2022

Name of Work : "Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Brihat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK/DEPWT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	11-11-2022
Sample Type	Pole Concrete for Park Grill
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M20/ 28 Days Compressive Strength
Date of Test	09-12-2022
Location	Sai Baba Park

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm^2	N/mm^2
1	Pole	M20	11-11-2022	09-12-2022	150x150x150	22500	577.85	25.68	25.83
2	Pole	M20	11-11-2022	09-12-2022	150x150x150	22500	610.30	27.12	
3	Pole	M20	11-11-2022	09-12-2022	150x150x150	22500	555.60	24.69	

Remarks : Results Found Satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)	Date:	28-12-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	28-12-2022
Sample Type	Kerb
Sample Grade/ Age	M20
Date of Test	28-12-2022
Location	Rajkumar Park Near West Gate

Sl No.	Location	Direction Rebound Hammer used	Rebound Hammer Reading	Avaerge Rebound Hammer Reading	Compressive Strength N/mm²
1	Rajkumar Park	Horizontal	34	34	30
2			33		
3			34		
4			36		
5			35		
6			34		

Remarks : Results Found Satisfactory

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Est Cost Rs 950.00 Lakhs

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 28-12-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	28-12-2022
Sample Type	Kerb
Sample Grade/ Age	M20
Date of Test	28-12-2022
Location	Vishweshwaryya park Near East Gate

Sl No.	Location	Direction Rebound Hammer used	Rebound Hammer Reading	Avaerge Rebound Hammer Reading	Compressive Strength N/mm²
1	Vishweshwaryya park	Horizontal	32	31	25
2			30		
3			32		
4			31		
5			32		
6			30		

Remarks : Results Found Satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 28-12-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	28-12-2022
Sample Type	Kerb
Sample Grade/ Age	M20
Date of Test	28-12-2022
Location	Sri Sai Baba Park Near South Gate

Sl No.	Location	Direction Rebound Hammer used	Rebound Hammer Reading	Avaerge Rebound Hammer Reading	Compressive Strength N/mm²
1	Sri Sai Baba Park	Horizontal	32	32	26
2			33		
3			31		
4			32		
5			33		
6			33		

Remarks : Results Found Satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 09-12-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	09-12-2022
Sample Type	Cobble Stone/PaverBlocks
Sample Type/Size	200x160x60 MM
Sample Grade/ Age	M30
Date of Test	09-12-2022
Location	Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm²	N/mm²
1	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	1010.00	40.08	41.61
2	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	995.00	39.48	
3	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	1012.00	40.16	
4	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	1100.00	43.65	
5	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	1075.00	42.66	
6	Cobble Stone	M30	10-09-2022	09-12-2022	200x160x60	25200	1100.00	43.65	

Remarks : Results Found Satisfactory

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Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 (Reaffirmed-2012) Date: 20-09-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Fine Aggregate
Date of Test	20-09-2022
Location	Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park
Total wt of the sample (gms):	1000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016			
					Grading Zone-1	Grading Zone-2	Grading Zone-3	Grading Zone-4
10	0	0	0.0	100	100	100	100	100
4.75	27	27	2.7	97.3	90-100	90-100	90-100	95-100
2.36	55	82	8.2	91.8	60-95	75-100	85-100	95-100
1.18	239	321	32.1	67.9	30-70	55-90	75-100	90100
600	205	526	52.6	47.4	15-34	35-59	60-79	80-100
300	203	729	72.9	27.1	5-20	8-30	12-40	15-50
150	191	920	92.0	8.0	0-10	0-10	0-10	0-15
PAN	80	1000	100.0	0.0	-	-	-	-

Result: The Tested Sample Confirms to Grading Zone-II

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Est Cost Rs 950.00 Lakhs

Sanction No Job No-002-23-000002

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Test Report of Coarse Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3 & 4)-1963 (Reaffirmed-2012)	Date:	20-09-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Coarse Aggregate
Date of Test	20-09-2022
Location	Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park

Sieve Analysis (Particle Size Distribution) of 20mm Down Coarse Aggregate

Total wt of the sample (gms): 5000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016
40	0	0	0.0	100	100
20	245	245	4.9	95.1	90-100
10	2560	2805	56.1	43.9	20-55
4.75	2033	4838	96.8	3.2	0-10
PAN	162	5000	100.0	0.0	-

Remarks : Results Found Satisfactory

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Sanction No

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Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 | Date: 20-09-2022

Name of Work :"Development and Providing grill fencing to Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park and surrounding Parks in 'B' Sector Ward No 04 of Yelahanka Assembly Constituency"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Coarse Aggregate
Date of Test	20-09-2022
Location	Vishweshwarayya Park, RajKumar Park, Sri Sai Baba Park

Physical Properties

Sl. No	Physical Properties	Result	Requirements as per IS: 386-2016
1	Flakines Index (%)	13.20	Combined Flakiness and Elongation Index ahall nor exceed 40% for uncrushed and crushed
2	Elongation Index (%)	12.6	
3	Specific Gravity	2.66	-
4	Bulk Density (Loose) (Kg/l)	1.54	-
5	Bulk Density (Composed) (Kg/l)	1.58	-
6	Water Absorption (%)	0.22	-
7	Aggregate Crushing Value (%)	24.50	Max 30% for Aggregates to be used in concrete for wearing surfaces, In case aggregate Crushing Value exceeds 30% then the test for 10% fines should be conducted for aggregate to be used in concrete oter tha for wearing surfaces
8	Aggregate Impact Value (%)	22.80	Max 30% for aggregate to be used in concrete for wearing surfaces, 45% for aggregate to be used in concrete other than for wearing surface.

Remarks : Results Found Satisfactory

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